



# UNITED STATES MARINE CORPS

MARINE CORPS BASE  
PSC BOX 20004  
CAMP LEJEUNE, NORTH CAROLINA 28542-0004

BO 5090.3  
BFAC  
18 JUL 1994

## BASE ORDER 5090.3

From: Commanding General  
To: Distribution List

Subj: MANAGEMENT OF LEAD-CONTAINING MATERIAL

Ref: (a) NAVENVIRHLTHCEN ltr 6260 Ser 3213/6507 of 28 Dec 92 (NOTAL)  
(b) CMC ltr 1101 LFF-3 of 31 Mar 93 (NOTAL)  
(c) 29 CFR 1910.1025, OSHA General Lead Industry Exposure (NOTAL)  
(d) 29 CFR 1926.62, OSHA Construction Lead Exposures (NOTAL)

Encl: (1) Examples of Uses of Lead/Possible Sources of Exposure  
(2) Requirements, Controls, and Procedures for Personal Protection  
While Working with or Near Lead-Containing Material

1. Purpose. To set forth requirements, procedures, and safety measures to protect civilian employees, contractors working on the Base, and Marine Corps personnel and their dependents/guests, as set forth in the references. To delineate responsibilities for testing and work operations during handling, removing, and disposing of lead-base paint covered structures and lead-containing materials.

## 2. Background

a. Lead is a highly toxic metal. Because it is stable and easy to work with, it has been used for a variety of purposes as noted in enclosure (1). Lead can produce a range of adverse human health effects, particularly in children and fetuses. Effects include nervous and reproductive system disorders, delays in neurological and physical development, cognitive and behavioral changes, and hypertension. The human body has no need for and makes no beneficial use of even the smallest amounts of lead.

b. The most common sources of lead exposure in and around the home and work place are lead-base paint, household/barracks dust (from deteriorating lead paint), soil, and drinking water.

c. Lead poisoning can affect people of any age, race, geographic region, or socioeconomic level. Anyone who is exposed to lead through ingestion or inhalation may develop an elevated blood lead level. The Centers for Disease Control and Prevention have defined a blood-lead level of concern for children as any level at or above 10 micrograms per deciliter (ug/dl). Lead can harm virtually every system in the human body. Lead is particularly harmful to the developing brain and nervous system of fetuses and young children. Blood lead levels and symptoms are as follows:

- (1) Low levels: 10-35 ug/dl children  
10-40 ug/dl adults

Most often, there are no symptoms.

- (2) Moderate levels: 35-50 ug/dl children  
40-60 ug/dl adults

There may be no symptoms or there may be fatigue, irritability, tremors, headaches, difficulty concentrating, abdominal pain, vomiting, weight loss or constipation.

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- (3) High levels: Over 50 ug/dl children  
Over 60 ug/dl adults

There may be no symptoms or symptoms may be those mentioned above under "moderate levels."

At very high levels, symptoms can include convulsions, paralysis, coma, or death.

### 3. Scope

a. Procedures and regulations contained in this Order apply to exposure of civilian employees, contractors working aboard the Base, and Marine Corps personnel and their dependents/guests while aboard Camp Lejeune and New River Air Station. These guidelines shall be applied to the following conditions if direct disturbance is encountered:

(1) Extensive abatement or removal of large amounts of lead-containing material; e.g., lead-base paint, etc., where full protection must be provided not only to exposed workers, but to all surrounding personnel and areas as noted in enclosure (2).

(2) Repair or removal of comparatively small amounts of lead-containing material, such as minor repair jobs, removing peeling paint, lead soldering, ceramic ware, soil removal, welding, and particularly sanding or scraping paint.

b. Contractors and contractor personnel will be required to conform to specifications delineated in the contract and also to follow the guidelines established by the references.

c. All Self-Help Marine personnel will be required to follow these regulations.

### 4. Policy

a. It is Marine Corps policy to eliminate the use of lead-containing material where substitute materials are available and to protect personnel from exposure to lead fumes and dust. Lead-containing material will not be used by untrained personnel or knowingly procured where suitable, alternate materials have been designated.

b. Proper work practices and engineering controls will be applied to comply with permissible exposure limits for lead. Compliance with permissible exposure limits shall not be achieved by use of respirators except:

- (1) Pending installation of these engineering controls.
- (2) Where these controls are technically not feasible.
- (3) During extreme emergencies.

c. Effective immediately, the removal of lead-containing material by scraping, burning, sanding and sand blasting is prohibited unless the current environmental and health protection procedures have been implemented and are functioning. Any official becoming aware that a removal of a suspect lead-containing material is being performed without proper protection will notify their command's Hazardous Material Disposal Coordinator.

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d. Officials responsible for the preparation, awarding, and administration of various types of contracts will assure that contracts include terms and conditions requiring compliance with the references and management of lead-containing materials in a manner that minimizes risks to human health/safety and the environment.

e. This Order will supplement existing Federal and State law pertaining to lead-containing material. In no way will this Order countermand or decrease the provision of law.

## 5. Action

### a. Assistant Chief of Staff, Environmental Management

(1) Assure compliance with State and Federal regulations for disposal of lead-containing material.

(2) Provide an activity point of contact with State and Federal environmental regulatory agencies.

(3) Keep abreast of higher headquarters, State, and Federal regulations and disseminate that information to all commands.

(4) Coordinate turn-in of all lead-containing material for disposal, provide related technical assistance, and maintain hazardous waste/hazardous material (HW/HM) disposal records required to track HW disposal.

(5) Provide transportation for disposal of lead-containing material requiring use of the public highways.

### b. Assistant Chief of Staff, Facilities

(1) Plan and program handling and placement of structure coated lead-containing materials safely into the Base Sanitary Landfill per State and Federal regulations.

(2) Plan and program the dissemination of information to occupants of Family Housing of their possible exposure to lead-containing material; e.g., lead in water, lead-base paint, etc. Provide information regarding lead-containing material in the Family Housing Manual (BO P11101.32).

(3) Plan and program construction/renovation contracts to include specifications for sampling, removal, disposal of lead-containing material per the references. Also, the specifications are to encompass the protection of the environment and worker protection from lead-containing material during the execution of those contracts.

### c. Assistant Chief of Staff, Logistics

(1) Ensure local stocks of paint do not contain lead more than .06% by weight for residential use and .3% by weight for non-residential use. Avoid procurement of paints that contain amounts of lead in excess of regulatory requirements.

(2) Maintain active product files through the Technical Research Section of suitable replacement materials which do not contain lead.

### d. Assistant Chief of Staff, Installation Security and Safety

(1) Ensure the mandated hazardous communication training includes instruction in the awareness, handling, and disposal of lead-containing material conducted by Base Safety.

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(2) The Base Safety Office is to include, as part of their annual inspection, notes on any obvious exposures to lead-containing materials; e.g., peeling paint, etc.

e. Commanding Officer, Naval Hospital


(1) Provide lead level detection screening through the Well Baby and Well Child check-up programs per enclosure (1) of reference (b). Those identified as requiring medical surveillance will be interviewed and assessed by the Preventive Medicine Service. When the source of lead is determined to be from a Base facility, then a report of same will be provided to the Assistant Chief of Staff, Facilities. In all cases, the findings will be provided to the health care provider and State or Local Health Departments as required.

(2) The Occupational Health staff will provide health risk training and monitoring to any employee found to be exposed to lead-containing products per reference (c).

f. Staff Judge Advocate as Supported by the Eastern Area Counsel Office. Provide legal advice for any action involving the management of lead-containing material and any legal action brought against Marine Corps Base, Camp Lejeune or its personnel acting within the scope of their employment based on exposure to lead-containing material.

g. Tenant Commanders. The Commanding Generals, II Marine Expeditionary Force, 2d Marine Division, 2d Force Service Support Group, and 2d Marine Expeditionary Brigade will establish and implement awareness training, command inspection programs, and other internal controls to assure compliance with applicable regulations set forth in this Order.

6. Concurrence. This Order has been coordinated with and concurred in by the Commanding Generals, II Marine Expeditionary Force; 2d Marine Division; 2d Force Service Support Group; 2d Marine Expeditionary Brigade; and the Commanding Officer, Marine Corps Air Station, New River.

  
R. C. MCELRAFT  
Acting Chief of Staff

DISTRIBUTION: A

Examples of Uses of Lead/Possible Sources of Exposure

Source: Adapted from ATSDR, Case Studies in Environmental Medicine: Lead Toxicity, September 1992, p.5.

Occupational

Plumbers/pipefitters  
Auto repairers  
Glass manufacturers  
Shipbuilders  
Printers  
Plastic manufacturers  
Lead smelters & refiners  
Police officers  
Steel welders/cutters  
Construction workers  
Rubber product manufacturers  
Gas station  
Battery manufacturers & recyclers  
Bridge, tunnel & elevated highway workers  
Firing range instructors  
Lead miners

Environmental

Lead-containing paint  
Soil/dust near lead industries, roadways, lead-painted homes  
Plumbing leachate  
Ceramicware  
Leaded gasoline  
Bridges

Hobbies & Related Activities

Glazed pottery making  
Target shooting at firing ranges  
Lead soldering (e.g., electronics)  
Painting  
Preparing lead shot, fishing sinkers  
Stained-glass making  
Car or boat repair  
Furniture refinishing  
Home remodeling

Substance Use

Folk remedies  
"Health foods" (such as some calcium supplements)  
Cosmetics  
Moonshine whiskey  
Gasoline "huffing" (sniffing gasoline from a container)

ENCLOSURE (1)

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REQUIREMENTS, CONTROLS, AND PROCEDURES FOR  
PERSONAL PROTECTION WHILE WORKING WITH  
OR NEAR LEAD-CONTAINING MATERIAL

1. General. This section contains requirements, controls, and procedures that are applicable for personnel working with or near lead-containing materials. These shall be considered minimum requirements and all necessary efforts must be applied to avoid hazards to personnel and the environment. Any questions or uncertainties should be immediately referred to the nearest occupational health/safety representative for resolution/clarification.

2. Planning

a. Operations involving lead-containing material should be segregated from other work to avoid exposure of other personnel to lead hazards.

b. Protection of employees during initial lead exposure assessments shall be provided with required personal protection equipment as if the permissible exposure limit (PEL) of fifty micrograms per cubic meter (50 ug/m3) over an 8 hour period did exist.

c. Training shall be provided per 29 CFR 1910.1025, OSHA General Lead Industry Exposure and 29 CFR 1926.62, OSHA Construction Lead Exposures.

d. The basis of initial determination of worker exposure shall be based on initial monitoring results collected as informational or on observation, which could indicate possible employee exposure to lead or on employee complaints/symptoms.

e. If initial and subsequent monitoring results indicate elevated exposure to lead over the action limit (AL) and PEL or if it is suspected, the following procedures and controls must be implemented:

(1) A respirator program must be established per 29 CFR 1910.1025, OSHA General Lead Industry Exposure and 29 CFR 1926.62, OSHA Construction Lead Exposures.

(2) Protective work clothing must be provided, e.g. coveralls or similar full-body work clothing. These will be provided in a clean and dry condition, at least weekly, and daily if airborne exposure to lead is greater than 200 ug/m3. Do not remove dust by blowing or shaking. The clothing must remain at the work site.

(3) Where exposure levels exceed the PEL, a negative air pressure enclosure will be established to control any lead dust. The use of negative air High Efficient Particulate Air (HEPA) filter microtrap machines will be used inside a polyethylene sheeted enclosure.

(4) The housekeeping of work areas will consist of maintaining all surfaces as free of lead dust as possible. Clean-up of floors and other surfaces shall, whenever possible, be cleaned using HEPA filter vacuum cleaners. The use of high phosphate containing soap solution will be used to wet wipe surfaces if HEPA vacuums are not available and if the airborne lead contamination exceeds 50 ug/m3. Compressed air shall not be used to remove lead from surfaces on a routine basis. Compressed air may be used only in conjunction with negative air enclosures with HEPA filtering capabilities. All efforts shall be taken to avoid soil contamination.

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(5) The consumption of food or beverage, uses of tobacco products, or the applying of cosmetics shall be prohibited in the lead exposure work area.

(6) Clean changing areas, separate eating and hand washing facilities will be provided for employees exposed to lead above the PEL.

(7) Showers will be provided where personnel exposure to lead exceeds the PEL. It is required that all employees exposed to lead above the PEL shower at the end of the work shift.

(8) All personnel exposed to lead above the action level for more than 30 days per year will be enrolled in the Occupational Lead Medical Surveillance Program at the Occupational Health Clinic. The medical records on all personnel exposed to lead above the action level shall be held for 20 years after employment or 50 years, whichever is longer.

(9) All personnel exposed to lead above the PEL shall be notified of their exposure within 5 working days after receipt of the monitoring results. Any personnel blood lead levels above 60 ug/dl will be removed from the work area to prevent further possible exposure to lead.

(10) Signs shall be posted in each area where personal exposure to lead is above the PEL. This sign shall read as follows:

WARNING  
LEAD WORK AREA  
POISON  
NO SMOKING OR EATING

The sign shall be legible at all times.

(11) Only trained and respirator qualified personnel will engage in lead removal operations that may exceed the PEL or create lead dust for more than 30 days per year.